

Technology in Rural Transportation

A recent study documented more than eighty proven, cost-effective, “low-tech” solutions to rural transportation needs, most developed or implemented by local transportation professionals. One of these solutions is outlined below:



Learn all about the simple solutions on the Internet at <http://inform.enterprise.prog.org>

The simple solutions report is available from Hau To at (503) 892-2533, or email: to@crc-corp.com

Moose-Vehicle Collision Mitigation Methods

Overall goal:

To determine the most effective deterrent for keeping moose out of the roadways.

Technical approach:

At around 500 collisions per year, the State of Alaska has the highest number of moose vehicle collisions on its highways of anywhere in North America. On rural roadways, these collisions represent over twenty percent of all motor vehicle accidents. This amount can double during winters of heavy snowfall.

The Alaska DOT has experimented with several methods to prevent collisions. Fencing was installed along controlled-access roads with few driveways. Additionally, it has been found that one of the most effective methods of reducing moose vehicle accidents is to illuminate the roadside. With nearly three-quarters of all accidents occurring during hours of darkness, there is a strong indication that visibility is a key factor in moose vehicle accidents.

Eight miles of continuous illumination were installed on the Glenn Highway in the summer of 1987. The Glenn Highway is a controlled access divided highway with enough traffic in winter months to warrant lighting regardless of moose vehicle collisions. Prior to installing lighting, this stretch of roadway was the most evident in the state for moose vehicle collisions. Two reviews of this project showed a 70% reduction in collisions in lighted areas.

A special underpass was also built on the Glenn Highway fencing project and is currently being used by moose. An underpass is a structure like any



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other bridge. Its cost will vary depending on whether it is built as a tube or a bridge and the span length. It requires regular field inspections and patching or replacement. In most locations, it may be necessary to construct underpasses in combination with fencing. The underpasses can be used to allow moose access between winter and summer habitat, which helps to preserve a healthy animal population.

Some of the roads ranking high in moose vehicle collisions also experience high daytime and nighttime accident rates. Some mitigation measures, such as clearing vegetation and adding lighting, could benefit these other accident types as well.

Current status:

This system has been fully implemented and is in use today.

**Location /
geographic scope:**

Eight segments of highway that were identified as having the highest number of collisions.

Agencies involved:

Alaska Department of Transportation

Cost information:

Costs vary, depending on the number of miles of highway involved and how long lighting is left on.

Key contacts:

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**Have goals been
achieved?**

A 1995 inspection of the Glenn Highway led to the conclusion that the effectiveness of the underpass/fencing/lighted areas on moose vehicle accidents over a five-year period appears to be around ninety percent.

Solution timeline:

Alaska originally began investigating collision deterrents in the 1970's, and continue their research today.

